BACKUP

SYSCOM video

IP SURVEILLANCE BEYOND IMAGINATION

iNEX®

User's Manual

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Chapter 1 — Introduction

This manual describes installation and operation of iNEX Backup software, which is designed to be used with iNEX Standard software.

The backup service controls backup of recorded video saved in the iNEX recording servers or DVRs and playback of backed-up video saved in the iNEX backup server. The iNEX system performs the backup and playback based on the settings of the administration or federation service. If the backup service is registered on an administration service, the iNEX system only backs up video saved in the recording servers and DVRs which are registered on the administration service. If the backup service is registered on a federation service, the iNEX system backs up video that is saved in the recording servers and DVRs registered on the all administration services that are registered on the federation service.

A maximum of 64 backup servers can be used, and a maximum of 64 recording servers and 256 DVRs can be registered on one backup server. The number of channels that can be backed up differs depending on the type and number of WIBU-Keys (maximum 256 channels). Ask your dealer or distributor about the number of channels that can be backed up using your iNEX software.

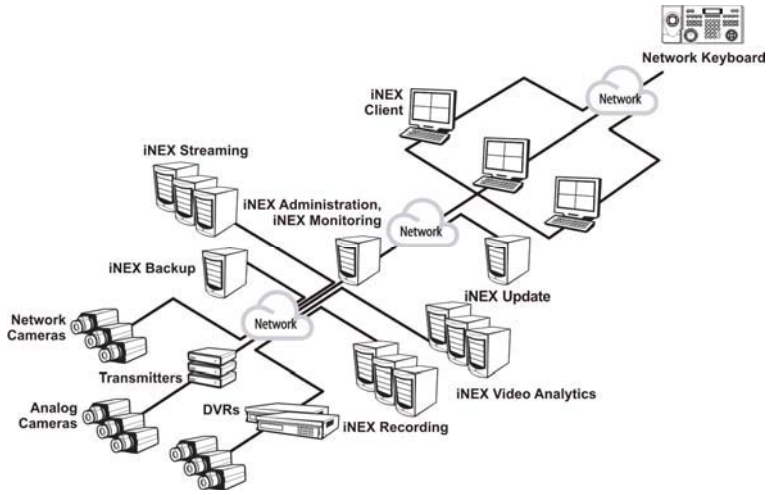
NOTES:

- Recording speed and backup speed might decrease when video is backed up while recording. It is recommended that you limit the network bandwidth of the backup server properly to minimize the decrease of recording speed. Refer to *Chapter 4 — Recorded Video Backup, 4.2 Setting up Backup Schedule* (p. 22) for details about limiting the network bandwidth.
- Backup speed might decrease or some sections of video may not be backed up depending on network conditions or system performance. In this case, it is recommended that you increase the network bandwidth for the iNEX system or upgrade the system specifications.
- It is not supported to back up recorded video saved in DVRs which provide the hour segments timetable and in PC-based DVRs. Audio may be excluded when backing up recorded video saved in DVRs depending on the specifications and version of the DVR.
- This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (*http://www.openssl.org/*).
- The software included in this product contains some Open Sources. You may obtain the complete corresponding source code from us. See the Open Source Guide on the software CD (*OpenSourceGuide**OpenSourceGuide.pdf*) or as a printed document included along with the User's Manual.

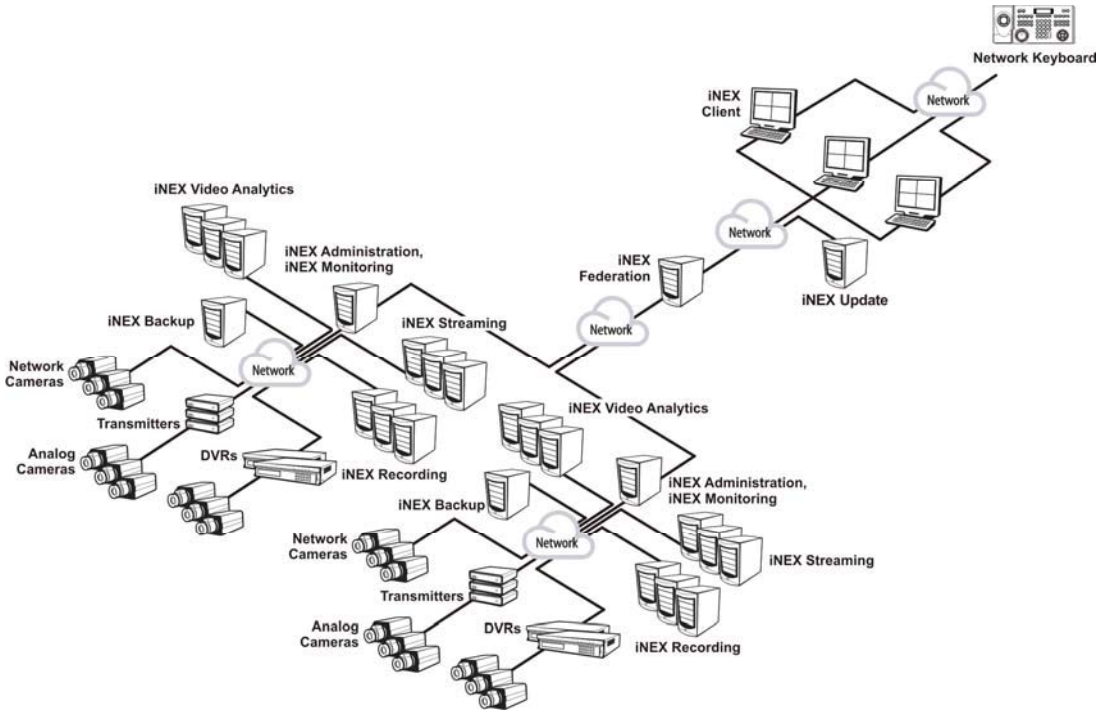
1.1 System Diagram

Backup Service Registered on Administration Service

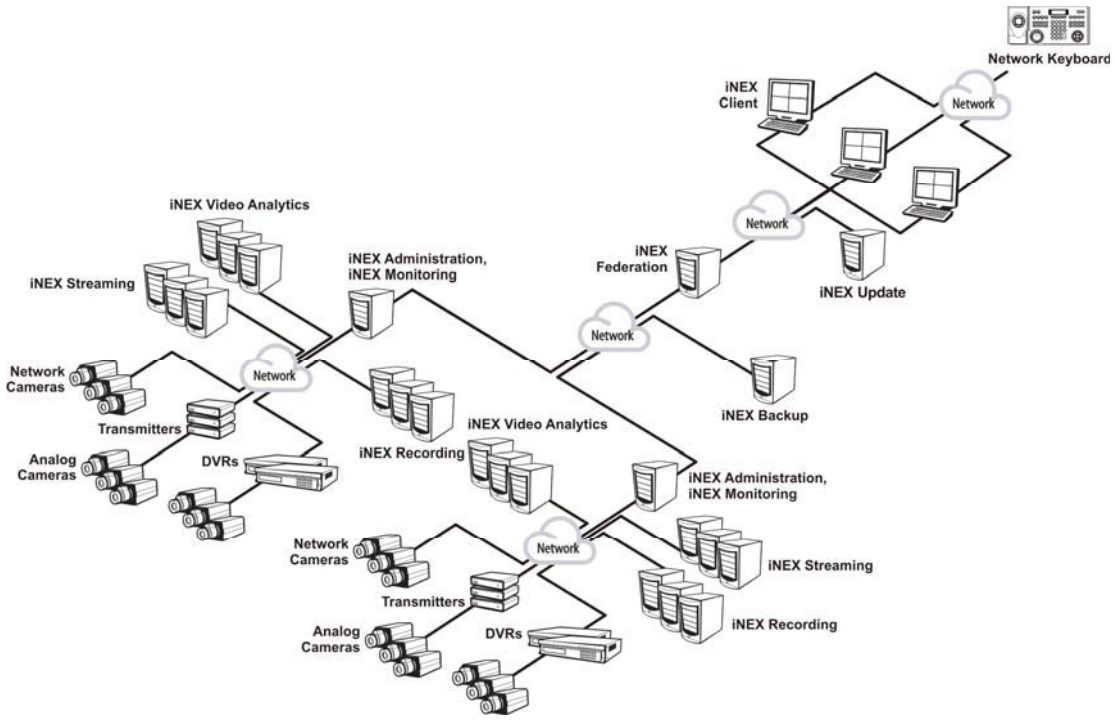
Single-System



Multi-System



Backup Service Registered on Federation Service



Chapter 2 — Installation

2.1 Product Information

Package Contents

- Installation CD
- User's Manual
- WIBU-Key (USB Dongle)

NOTES:

- If a WIBU-Key is removed from a backup server, the backup might not be done properly.
- When you connect or remove a WIBU-Key, stop running the backup service first.

System Requirements

- Operating System: Microsoft® Windows® XP x86 (32 Bit)/Vista (Home Standard, Business, Ultimate, Enterprise), Microsoft® Windows® 7 (Home Premium, Professional, Ultimate), Microsoft® Windows® Server 2003/2008
- CPU: Intel Core II Quad 8200 2.33 GHz/Intel Xeon 3.0 GHz or faster
- RAM: 2GB or more
- VGA: ATI RadeonTM HD 2400 or NVIDIA GeForce FX5500 (ATI recommended) (1024x768, 24bpp or higher)
- Hard Disk Drive: 5 GB or more free space
- LAN: Gigabit Ethernet or faster

2.2 Installation

NOTES:

- It is recommended to install the backup service on a separate PC from other iNEX services and Client program for better performance of video backup and playback.
- In the Windows Start menu, go to *Control Panel*. Double click the *Power Options* to open the Management Properties dialog box. Under the *Power Schemes* tab, set both *Turn off monitor* and *Turn off hard disks* to *Never*.
- Installing the Client program of iNEX Backup is identical to installing that of iNEX Standard. Refer to the iNEX Standard User's Manual for details.

CAUTION: If an older version of iNEX software is installed on your computer, a screen appears asking you to upgrade the software. In this case, you are required to upgrade the software according to the instructions in the screen.

Server System

1. Insert the software CD in the backup server.

2. Run the Setup.exe file of the software CD.

NOTE: The *User Account Control* window might appear when using the Microsoft® Windows® Vista or later operating system. Click *Allow* and install the software following the instructions.

3. Select the language in which to run the program and then click OK.

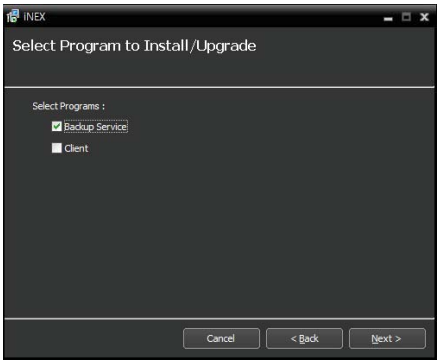
NOTES:

- To properly display the selected language, your PC's operating system should be set to support the selected language.
- To change the iNEX program's language after the software has been installed, select *Language Selector* in the *iNEX → Utility* folder of the *Start* menu before running the *iNEX* program.

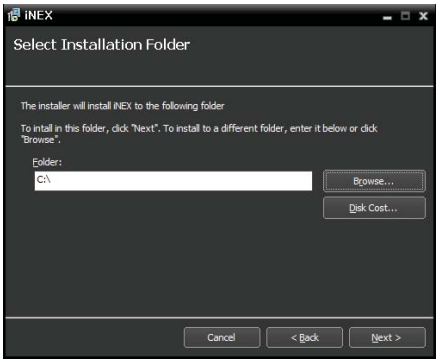
4. When the following screen appears, select Install and click Next.

iNEX
Welcome to the iNEX Setup Wizard
The installer will guide you through the steps required to install iNEX on your computer.
Choose setup operation.
Install
Install WibuKey Driver only
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel
< Back
Next >

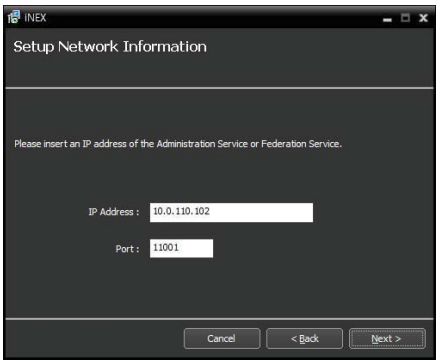
5. Select Backup Service and click Next.



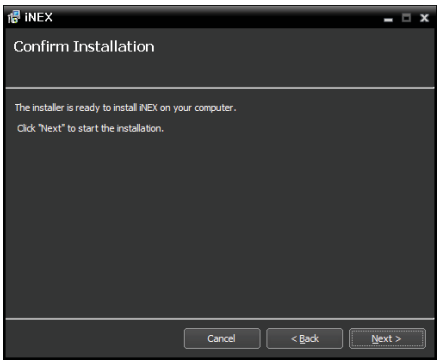
6. Designate the folder path to install the service. Clicking the Disk Cost… button shows the available and required disk space for each hard disk drive for the installation. Then click Next.

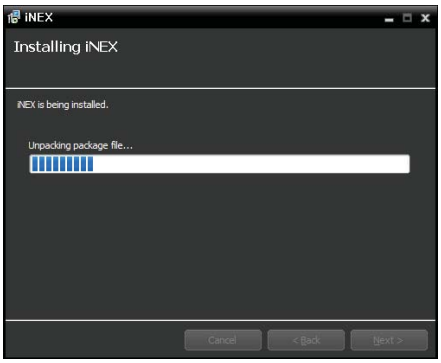

iNEX
Select Installation Folder
The installer will install iNEX to the following folder
To intall in this folder, click "Next". To install to a different folder, enter it below or click "Browse".
Folder:
C:\
Browse...
Disk Cost...
Cancel
< Back
Next >

7. Enter the IP address and port number of the administration or federation service and click Next. You can change the settings in the Service Manager program after completing installation. When the installation is complete, the backup service is connected to the administration or federation service via the network if the services are operating.

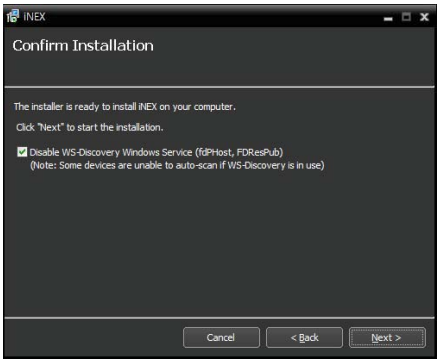


8. When the following screens appear, click Next.

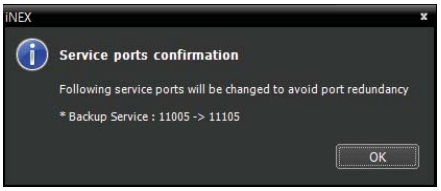

iNEX
Confirm Installation
The installer is ready to install iNEX on your computer.
Click "Next" to start the installation.
Cancel
< Back
Next >



NOTE: The following screen appears when using Microsoft® Windows® Vista or later operating systems. It is recommended that you check the *Disable WS-Discovery Windows Service (fdPHost, FDResPub)* box. If you do not check the box, the iNEX program cannot auto-scan devices using ONVIF™ Conformance protocol when scanning devices for device registration.


iNEX
Confirm Installation
The installer is ready to install iNEX on your computer.
Click "Next" to start the installation.
Disable WS-Discovery Windows Service (fdPHost, FDResPub)
(Note: Some devices are unable to auto-scan if WS-Discovery is in use)
Cancel
< Back
Next >

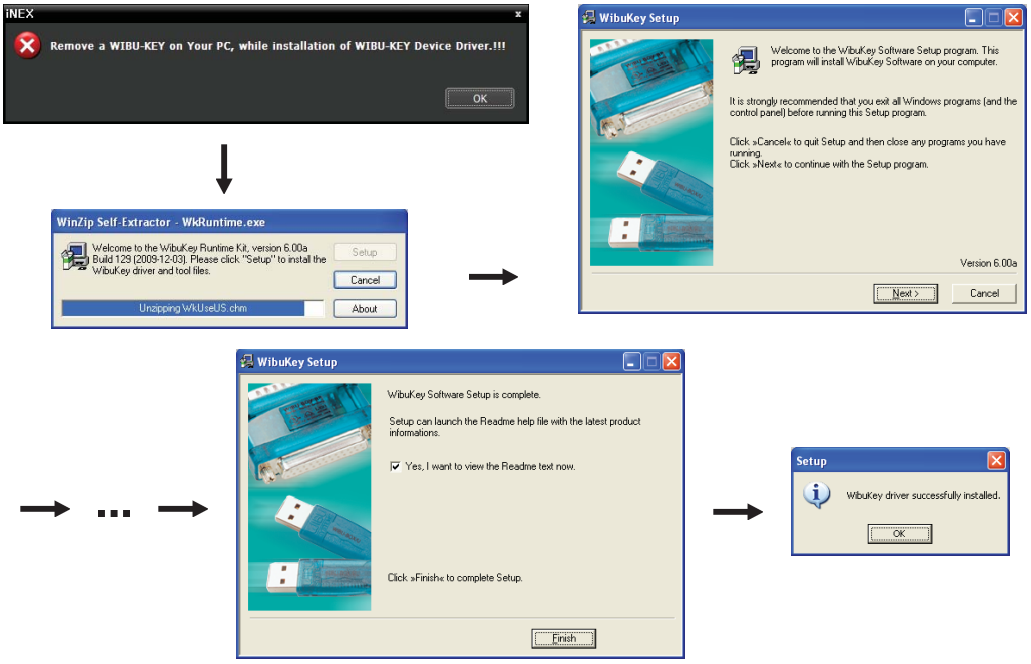
NOTE: The following screen appears when the port number of the service being installed is already in use, and the screen displays the port number that will be changed. The changed port number will be applied when the service starts operating after installation.


iNEX
Service ports confirmation
Following service ports will be changed to avoid port redundancy
* Backup Service : 11005 -> 11105
OK

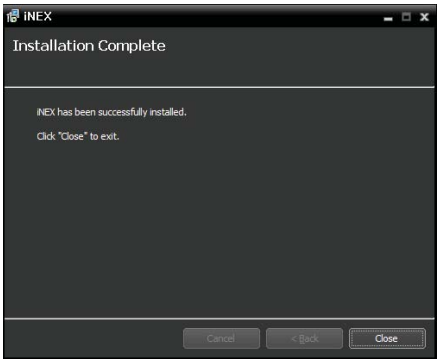
NOTE: *.NET Framework* and the *Visual C++ Runtime Libraries* are installed automatically, and it may take some time. This installation step will be skipped if the programs are already installed on your computer.

9. Disconnect the WIBU-Key from the server if a WIBU-Key is connected. Then install the WIBU-Key device driver following the instructions.

iNEX
Decide Wibukey Device Driver Installation
Check to Install Wibukey Driver.
Install Wibukey Device Driver
Note: Wibukey Device Driver is rquired to start service.
Cancel
< Back
Next >


iNEX
Remove a WIBU-KEY on Your PC, while installation of WIBU-KEY Device Driver.!!!
OK
WinZip Self-Extractor - WkRuntime.exe
Welcome to the WibuKey Runtime Kit, version 6.00a Build 129 (2009-12-03). Please click "Setup" to install the WibuKey driver and tool files.
Setup
Cancel
About
Unzipping WkUseUS.chm
WibuKey Setup
Welcome to the WibuKey Software Setup program. This program will install WibuKey Software on your computer.
It is strongly recommended that you exit all Windows programs (and the control panel) before running this Setup program.
Click »Cancel« to quit Setup and then close any programs you have running.
Click »Next« to continue with the Setup program.
Version 6.00a
Next >
Cancel
WibuKey Setup
WibuKey Software Setup is complete.
Setup can launch the Readme help file with the latest product informations.
Yes, I want to view the Readme text now.
Click »Finish« to complete Setup.
Finish
Setup
WibuKey driver successfully installed.
OK

10. When the following screen appears, click the Close button to complete the installation.



NOTE: After successfully installing the service, the service, Service Manager program (the icon is displayed in the notification area of the task bar) and the Setup program run automatically.

11. Connect WIBU-Keys to the backup server.

2.3 Uninstall

1. Stop running the services and Client program first.

NOTE: The iNEX software might not uninstall correctly if you uninstall it while the services or Client program is running.

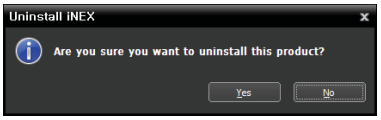
CAUTION: The iNEX software should be uninstalled following the procedures below. If you delete the installation folder manually, the iNEX software cannot be uninstalled or reinstalled.

2. Go to the Start Menu and click iNEX. Click Uninstall iNEX.

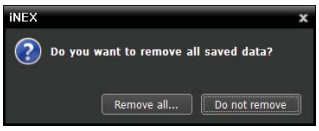
NOTE: You can uninstall the software by using the software CD. Insert the software CD in the backup server and run the *Setup.exe* file. Select *Remove* and click *Next*.

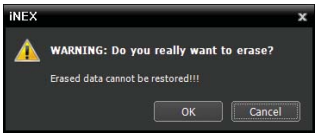
iNEX
Welcome to the iNEX Setup Wizard
The installer will guide you through the steps required to install iNEX on your computer.
Choose setup operation.
Repair
Remove
Install WibuKey Driver only
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel
< Back
Next >

3. Click Yes when the following screen appears.



4. Click the Remove All or Do not remove button when the following screen appears. Clicking the Remove All button deletes all saved data including backed-up video and previous settings in the system. Clicking the Do not remove button uninstalls the software without deleting any saved data in the system and keeps all saved data in the system.





NOTE: The deleted data cannot be restored once the data is deleted.

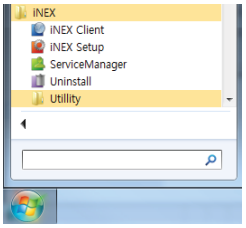
5. Click the OK button to complete the uninstall process.

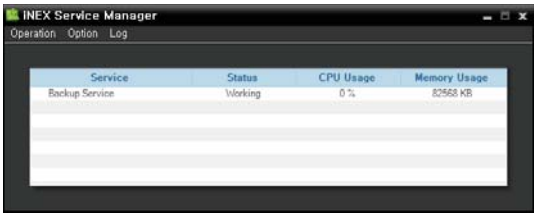
Chapter 3 — Getting Started

Services should be running on the iNEX server for the iNEX program to operate.

3.1 Running Services

When the backup service is installed, the service runs automatically. You can also start or stop running the service manually. Go to the Start Menu → Click iNEX → Run the Service Manager program.



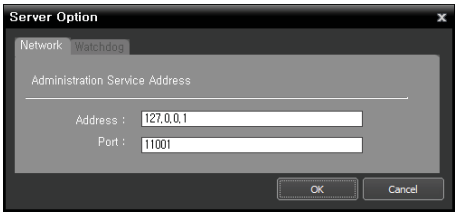


Check the status of the service. If the service is not listed as Working under Status, start the service manually. Refer to the iNEX Standard User's Manual for details about the Service Manager program.

3.2 Registering Backup Service

You must register backup services (max. 64) on the administration or federation service. If the IP address and port number of the administration or federation server is entered correctly during the installation, the service is registered on the administration or federation service automatically. Registering the backup service on the administration service allows you to back up video saved in the recording servers and DVRs registered on the administration service. Registering the backup service on the federation service allows you to back up video saved in recording servers and DVRs registered on all administration services that are registered on the federation service.

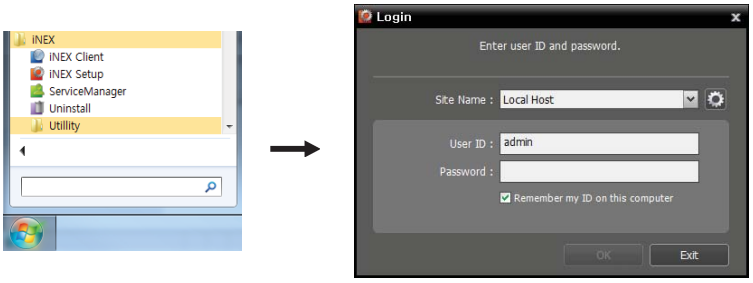
The backup service should be connected to the administration or federation service via the network connection, on which the backup service is registered. Go to the Start Menu and click iNEX. Run the Service Manager program and click the Option – Server Option menu.



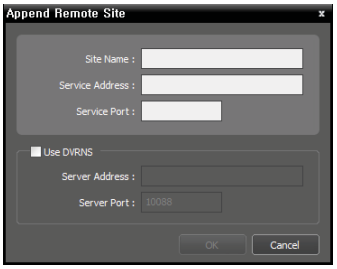
- Address, Port: Set up the IP address and port number of the administration or federation server for connection to the administration or federation service.

Registering on Administration Service

1. Go to the Start Menu → Click iNEX → Run the iNEX Setup program and enter login information.



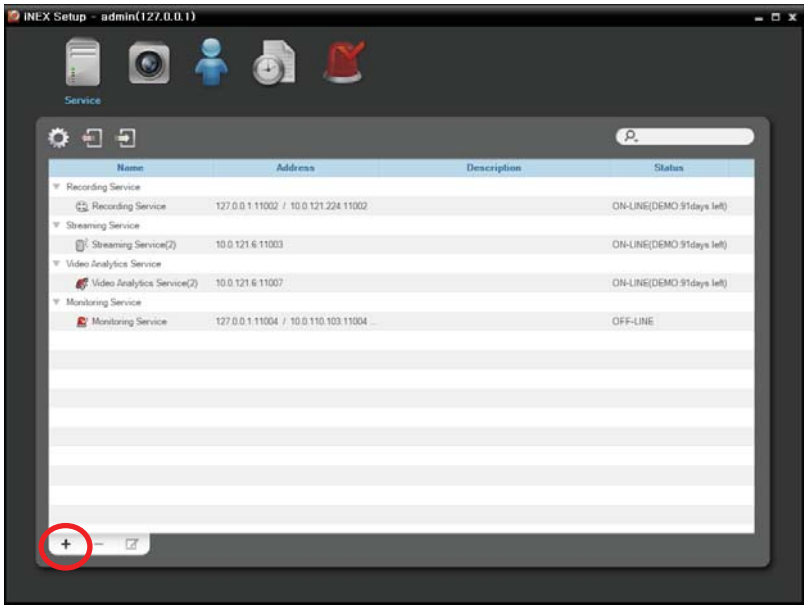
- Site Name: Select the administration service to connect to from the list. You can add other administration services to the list or modify information about the administration service in the list by clicking the button at the right.



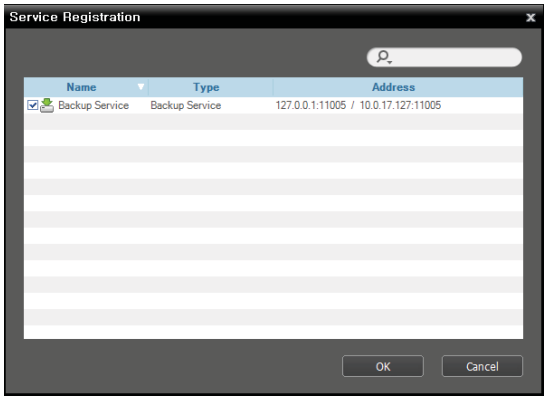
– Site Name, Service Address, Service Port: Designate the name of the administration service and enter the IP address and port number of the administration server to which the backup service is connected (default: 11001).

- User ID, Password: Enter your user ID and password. The default user ID is admin and default password is 12345678. You can change the user ID and password in the User menu. Refer to the iNEX Standard User's Manual for details.
- Remember my ID on this computer: Check the box if you want to save your ID for logging on.

2. Select the Service menu, and then register a backup service on the administration service following the procedures below.

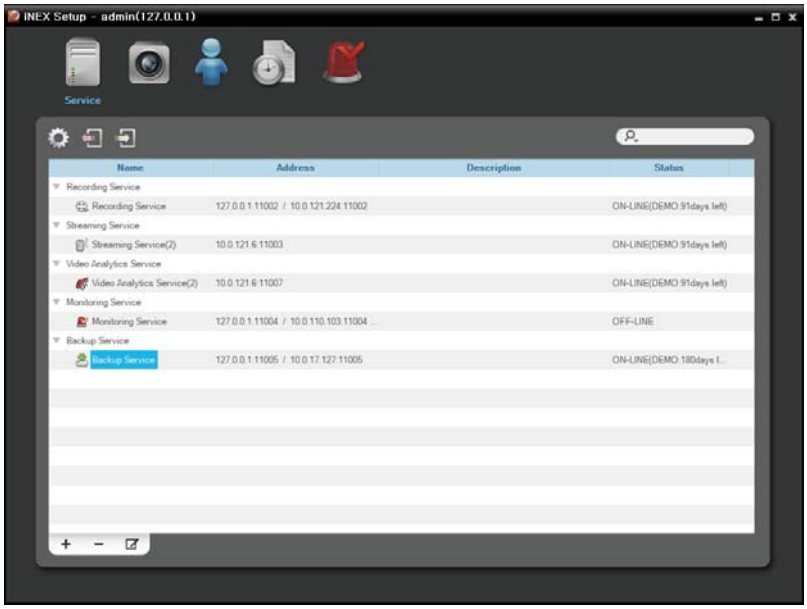


3. Click the ✚ button at the bottom. The Service Registration window appears, and a list of available services is displayed with information about each service.

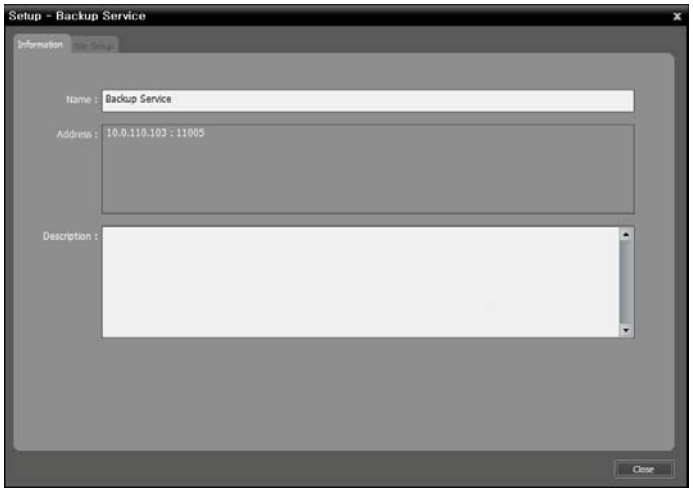


- Name: Displays services that are currently connected to the administration service via the network.
- Type: Displays the service type.
- Address: Display the IP address and port number of each server.

4. Select a backup service to register on the administration service and click the OK button.



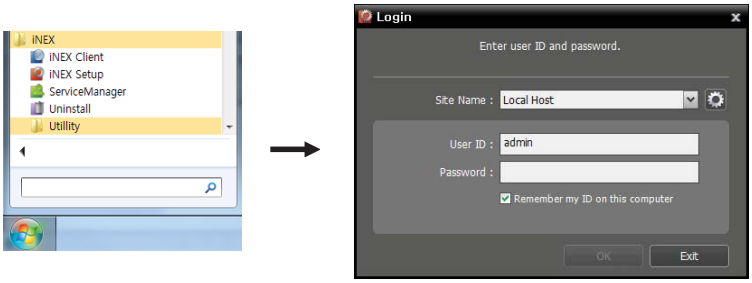
5. Select a backup service and click the button at the bottom. The Setup – Backup Service window appears. Select the Information tab.



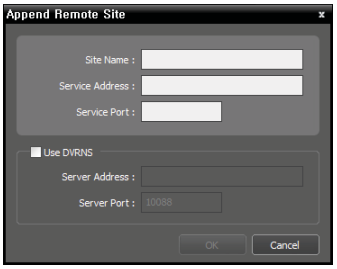
6. Enter the backup service's name and click the Close button.

Registering on Federation Service

1. Go to the Start Menu → Click iNEX → Run the iNEX Setup program and enter login information.

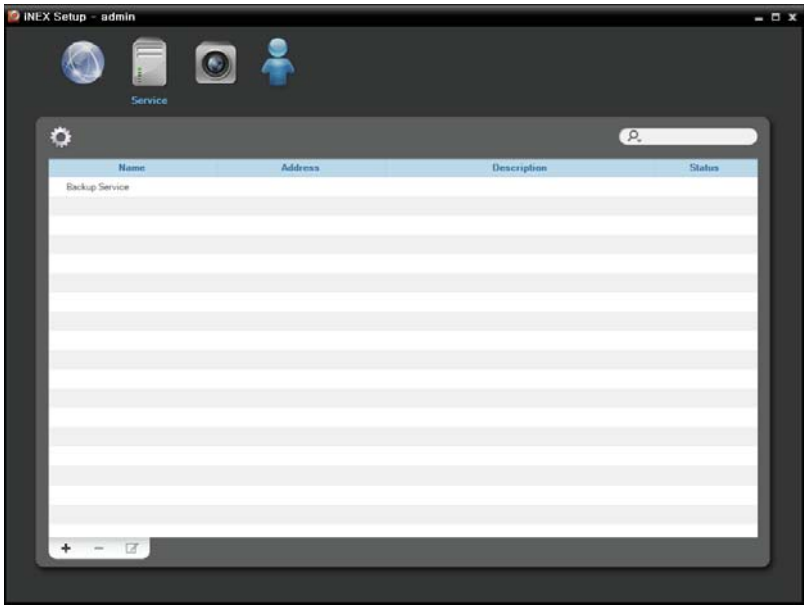


- Site Name: Select the federation service to connect to from the list. You can add other federation services to the list or modify information about the federation service in the list by clicking the ⚙ button at the right.



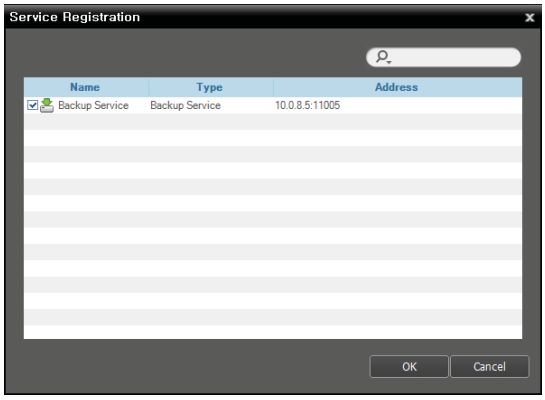
  - Site Name, Service Address, Service Port: Designate the name of the federation service and enter the IP address and port number of the federation server to which the backup service is connected (default: 11001).

- User ID, Password: Enter your user ID and password. The default user ID is admin and default password is 12345678. You can change the user ID and password in the User menu. Refer to the iNEX Standard User's Manual for details.
- Remember my ID on this computer: Check the box if you want to save your ID for logging on.



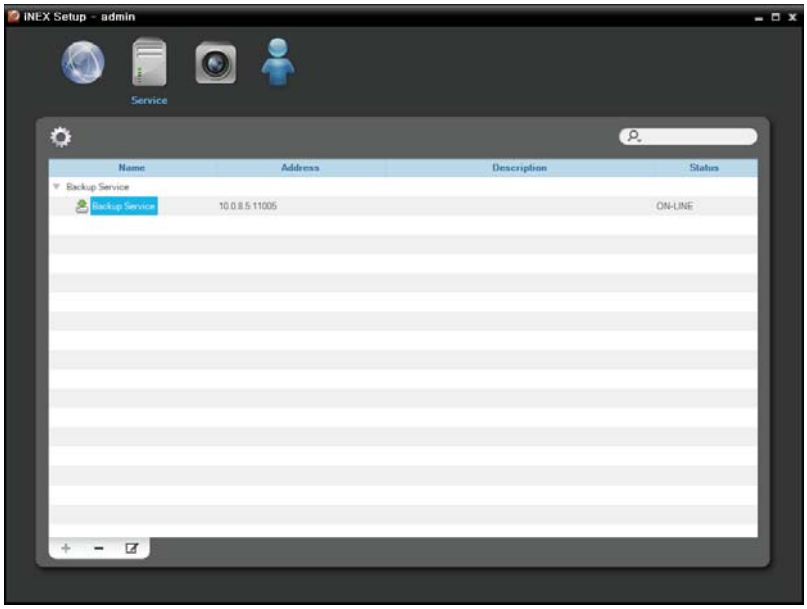
2. Select the Service menu.

3. Click the Backup Service, and then the ✚ button at the bottom. The Service Registration window appears.

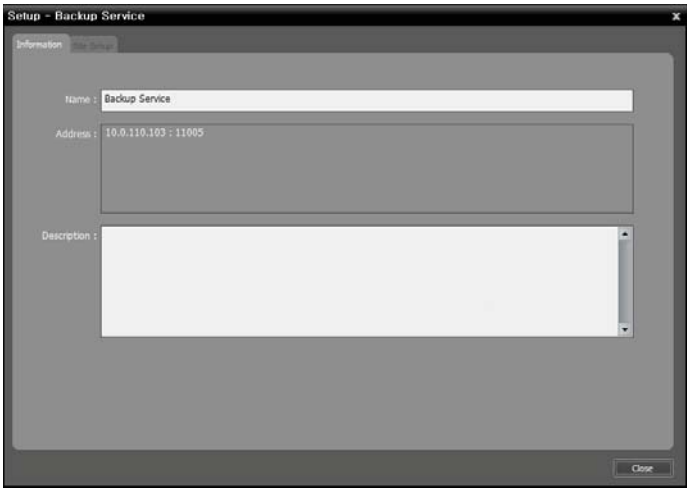


- Name: Displays backup services that are currently connected to the federation service via the network.
- Type: Displays the service type.
- Address: Display the IP address and port number of the backup server.

4. Select a backup service to register on the federation service and click the OK button.



5. Select a backup service and click the button at the bottom. The Setup – Backup Service window appears. Select the Information tab.



6. Enter the backup service's name and click the Close button.

Chapter 4 — Recorded Video Backup

You can back up recorded video saved in the recording servers or DVRs.

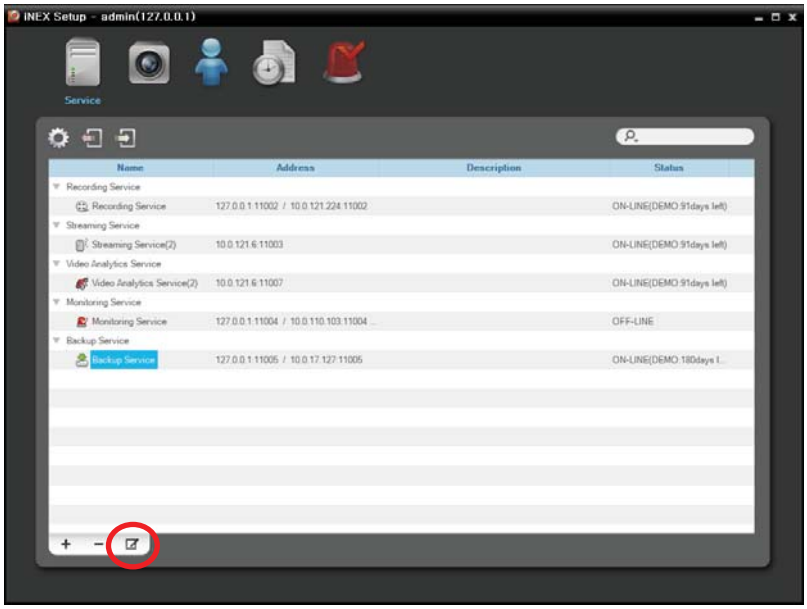
First, check the following and run the Setup program.

- Services should be running on the system. Refer to the iNEX Standard User's Manual for details.
- There should be recorded data in a recording server or DVR. Refer to the iNEX Standard User's Manual for details about recording.
- The backup service should be registered on the administration or federation service. Refer to 3.2 Registering Backup Service (p. 11) for details about registering a backup service.

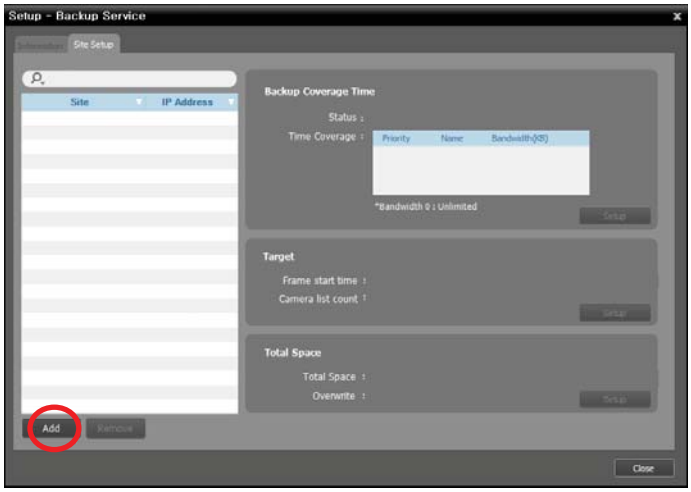
4.1 Adding Backup Sites

Adding to Administration Service

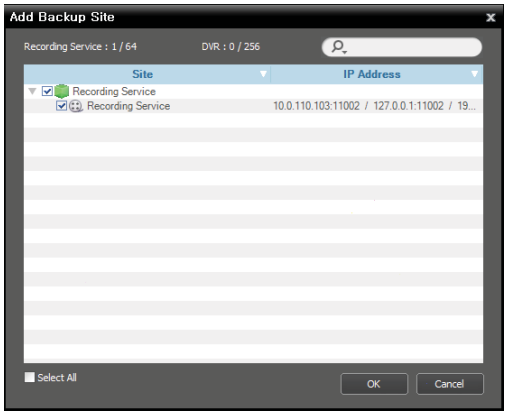
1. Go to the Start Menu → Click iNEX → Run the iNEX Setup program and enter login information.



2. Select a backup service and click the button at the bottom in the Service menu. The Setup – Backup Service window appears. Select the Site Setup tab.



3. Click the Add button at the bottom. The Add Backup Site window appears, and a list of available recording services and DVRs is displayed.

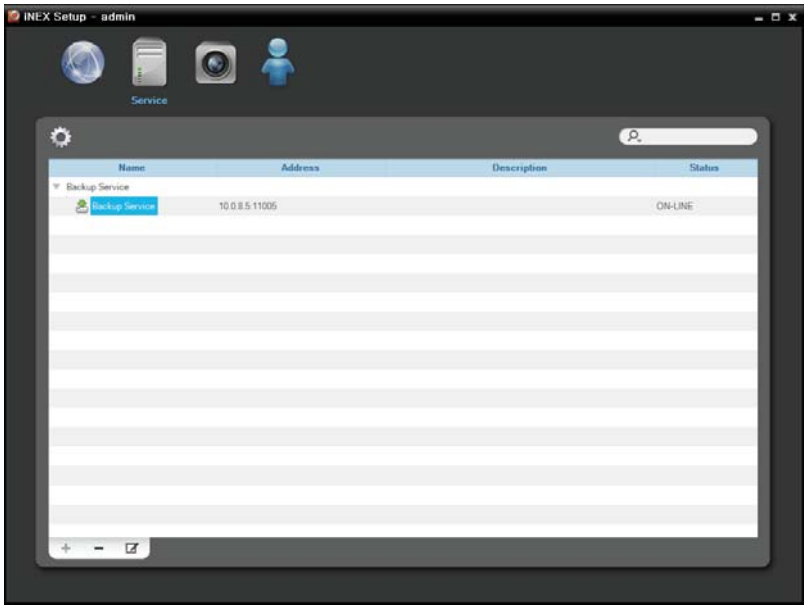


- Site: Displays recording services and DVRs that are currently connected to the administration service via the network.

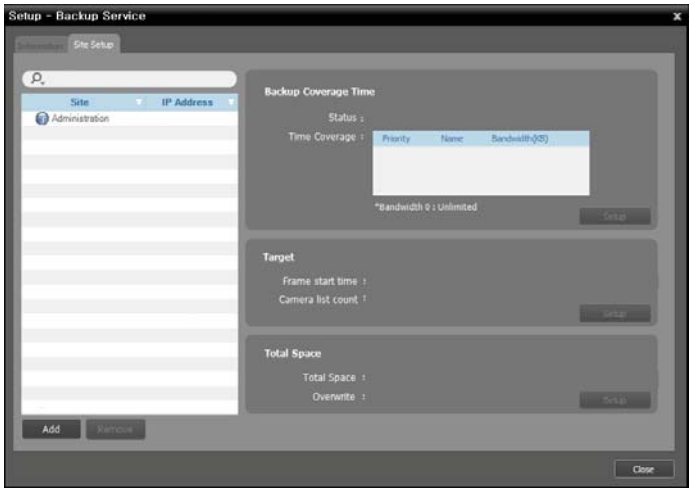
4. Select recording services and DVRs to back up and click the OK button.

Adding to Federation Service

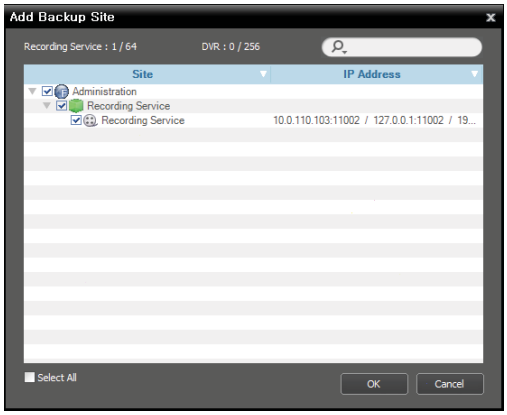
1. Go to the Start Menu → Click iNEX → Run the iNEX Setup program and enter login information.



2. Select a backup service and click the button at the bottom in the Service menu. The Setup – Backup Service window appears. Select the Site Setup tab.



3. Click the Add button at the bottom. The Add Backup Site window appears, and a list of available recording services and DVRs is displayed.

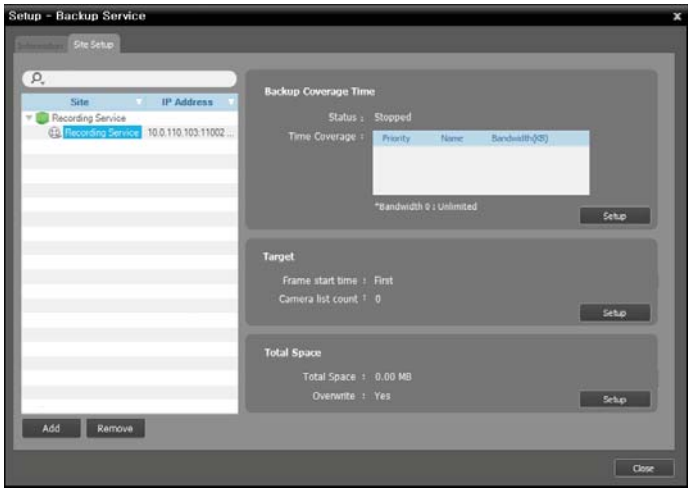


- Site: Displays recording services and DVRs that are currently connected to the federation service via the network.

4. Select recording services and DVRs to back up and click the OK button.

5. Set up a backup schedule and allocate storage. Refer to the iNEX Backup User's Manual for details about setting up the backup schedule and allocating storage.

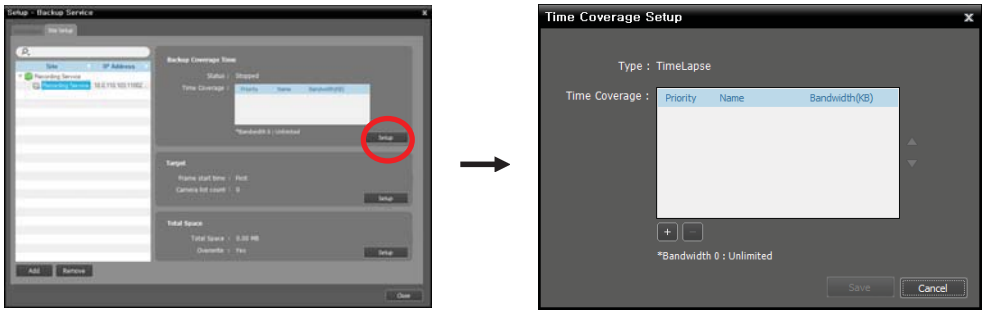
4.2 Setting up Backup Schedule



Select a recording service or DVR from the Site list after adding backup sites. You must set up a backup schedule separately for each recording service and DVR.

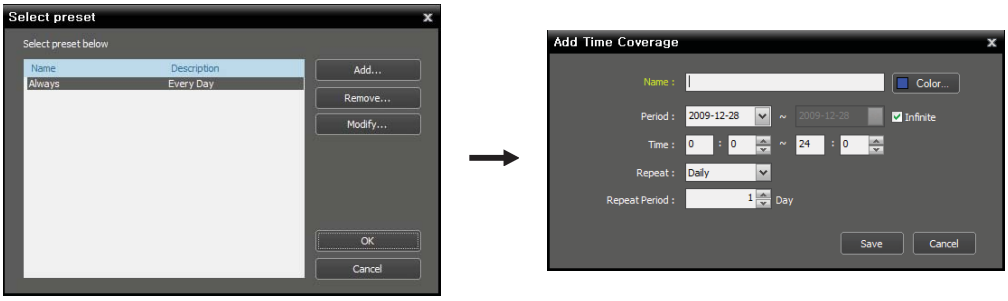
Backup Coverage Time

Click the Backup Coverage Time – Setup button and add a backup period Preset by clicking the + button.



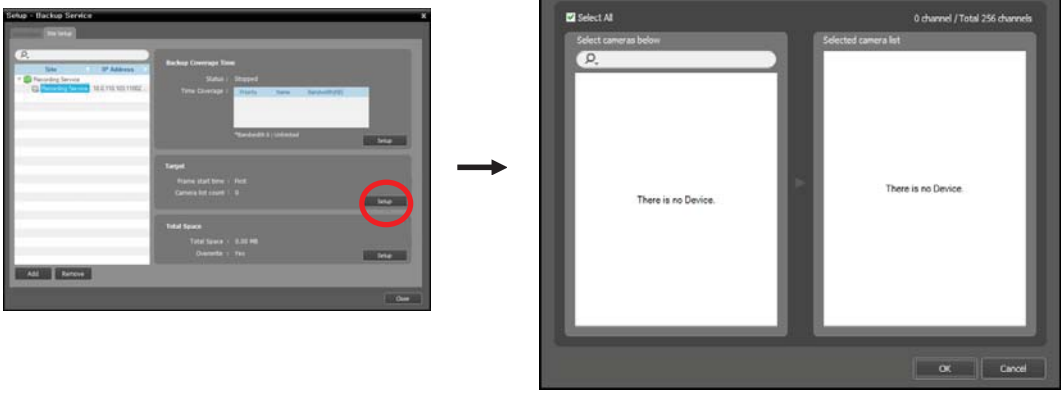
- Priority: Displays the priority of backup period Preset. You can change the priority by using the ▲ or ▼ button.
- Name: Displays the name of backup period Preset.
- Bandwidth: Sets up the maximum bandwidth. You can control the network bandwidth by limiting the network bandwidth depending on the network traffic. The proper bandwidth limit setting can minimize the decrease of recording speed when video is backed up while recording. However, if you limit the network bandwidth, backup speed might decrease.

You can add a new Preset or edit a saved Preset by clicking the Add or Modify button. Setting up the time span Preset for backup is identical to setting it up for recording. Refer to the iNEX Standard User's Manual for details.



Target

Click the Target – Setup button and select cameras to back up video.

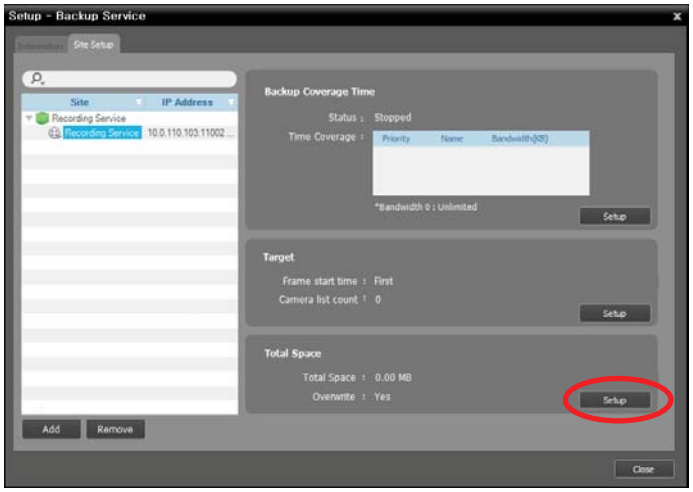


- Frame start time: Set up the time of the first frame of the recorded video to start backup, and click the Check button. You are required to select a segment if the administration server's time and date has been reset to a time that is earlier than previously recorded video and there is more than one video segment in the same time range. Selecting First starts backup from the first recorded video.
- Summary Backup: Backs up only key frames of recorded video. It allows backing up recorded data of longer period and makes the backup speed faster, but movements might not be smooth when playing back backed-up video. The key frame frequency is different depending on the encoding, and the higher the recording speed, the higher the frequency.
- Event Backup: Backs up only event-based recorded video.
- Select cameras below: Displays a list of cameras that have recorded video, which can be backed-up.
- Selected camera list: Displays the list of cameras to be backed up.

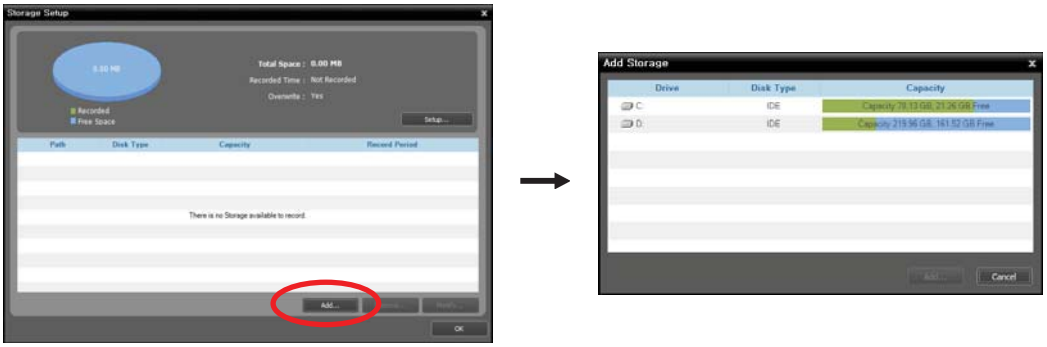
4.3 Allocating Storage

NOTES:

- USB hard disks, network hard disks and hard disks set to *Dynamic* cannot be allocated storage.
- It is recommended to add a new unformatted hard disk drive to ensure stable backup. If you are setting up a hard disk drive which contains data, however, you are to delete partition(s) and the file system in advance after formatting. Refer to the PC/server user's manual or consult with the PC/server manufacturer for details about how to format or delete the partition(s) and file system.
- When removing a hard disk drive that contains backed-up video from a backup server and installing it in another backup server, you cannot search or play back the video backed-up on the original backup server.
- The total amount of storage for one backup server cannot exceed 50,000 GB.

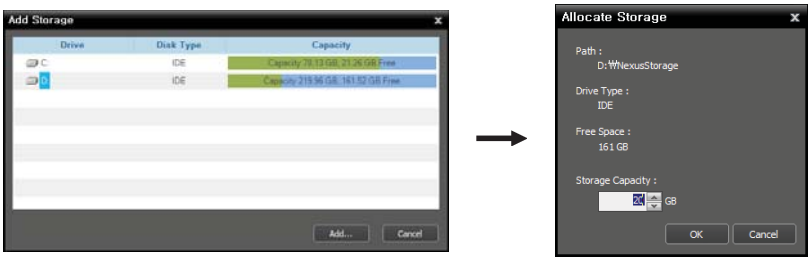


1. Click the Total Space – Setup button after adding backup sites and the Storage Setup window appears. Click the Add button at the bottom. The Add Storage window appears, and a list of available hard disk drives is displayed with information about each drive.



- Drive: Displays the drive name and volume label. If a file system has not been created on a hard disk drive, 'PHYSICALDRIVE No.' will be displayed instead of the drive name and volume label. The iNEX program considers any hard disk drive that does not use Windows file system (FAT32, NTFS) as if no file system has been created.
- Disk Type: Displays the type of hard disk drive.
- Capacity: Displays the total storage capacity and available storage capacity.

2. Select a hard disk drive to allocate storage and click the Add button at the bottom. The Allocate Storage window appears.



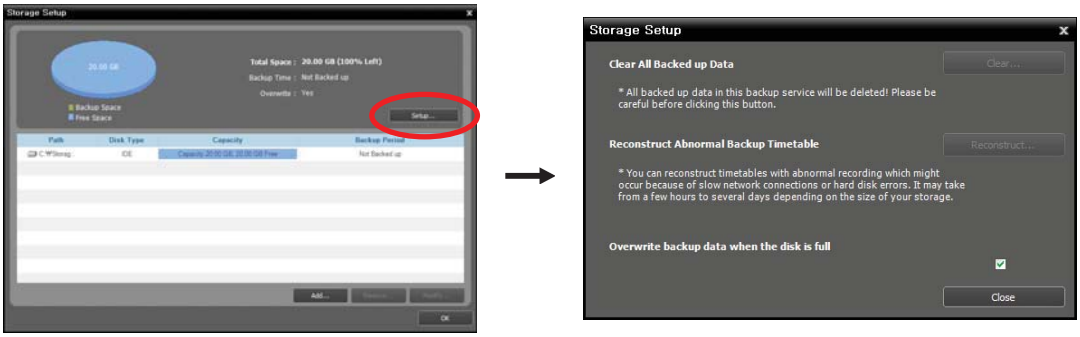
- Path: Displays the storage folder path.
- Drive Type: Displays the type of hard disk drive.
- Free: Displays the available storage capacity.
- Storage Capacity: Sets up the storage capacity to be allocated to the hard disk drive (Min. 20GB). If the Windows operating system is installed on the hard disk drive, you must reserve more than 10GB of free hard disk for proper system operation. If no file system has been created on the hard disk drive, the backup server automatically creates a proprietary video database file system when storage is allocated to ensure more stable backup and allocates storage to the entire hard disk drive automatically.

Managing Storage

You can manage storage of all hard disk drives used in the current backup server or of a specific hard disk.

Storage of All Hard Disk Drives

Click the Setup button. The Storage Setup window appears.


Storage Setup
Clear All Backed up Data
Clear...
* All backed up data in this backup service will be deleted! Please be careful before clicking this button.
Reconstruct Abnormal Backup Timetable
Reconstruct...
* You can reconstruct timetables with abnormal recording which might occur because of slow network connections or hard disk errors. It may take from a few hours to several days depending on the size of your storage.
Overwrite backup data when the disk is full
Close

- Clear All Backed-up Data: Deletes all backed-up data on all hard disk drives used in the current backup server.
- Reconstruct Abnormal Backed-up Timetable: When the network connection between the backup server and the recording server or DVR is too slow or a hard disk drive in the backup server is damaged, the backed-up data and the timetable information of the backed-up data might not match and the timetable in the Client program might display incorrect information. In this situation, clicking the button reconstructs the timetable to display backed-up data correctly on the timetable in the Client program.
- Overwrite backed-up data when the disk is full: Checking the box backs up over the oldest video data once all available storage space has been used.

Storage of a Specific Hard Disk Drive

Click the storage to edit in the storage list, and then the Modify button at the bottom. The Edit Storage window appears.

- Resize Storage: Allows you to increase the storage capacity.
- Clear Storage: Allows you to delete all data backed-up in the selected storage.

NOTE: Search or playback of backed-up data will be stopped when storage is resized or cleared.

CAUTION: Clearing storage deletes all data backed-up in the storage and the deleted data cannot be restored.

Chapter 5 — Backed-up Video Playback & Exportation

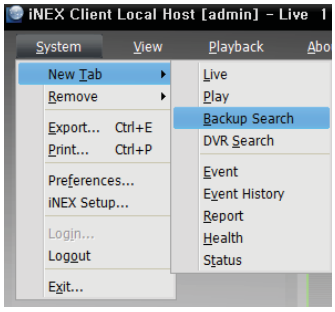
You can play back backed-up video or export backed-up video to USB devices.

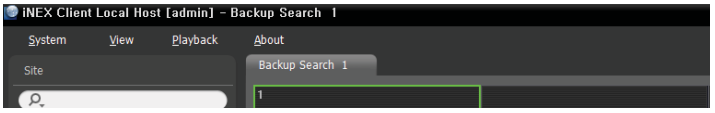
First, check the following and run the Client program.

- Services should be running on the system. Refer to the iNEX Standard User's Manual for details.
- Devices should be added to a device group. Refer to the iNEX Standard User's Manual for details.
- There should be backed-up data in the backup server. Refer to Chapter 4 — Recorded Video Backup (p. 19) for details.

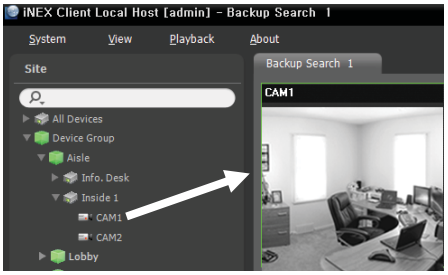
5.1 Playing back Backed-up Video

1. Search and playback of backed-up video in a backup server are supported in the Backup Search panel (maximum 4). If the Backup Search tab is not on the tab panel, go to the System menu, click New Tab and then Backup Search.





2. Click the Backup Search tab on the tab panel → Select a device or a camera to connect to from the Site list and drag and drop it on the Backup Search screen. Backed-up video from the selected device or camera is displayed on the screen. You can move a camera screen to the desired location on the Backup Search screen without stopping the current playback while playing back video. Select a camera screen and drag and drop it on the desired location.



   If a layout is registered on the administration service, you can play video in the layout format by selecting a desired layout from the Layout list and dragging and dropping it on the Backup Search screen.

NOTE: The Client system performance might seriously deteriorate when simultaneously monitoring or playing back video with 1280x720 or higher resolution on more than one camera screen.

3. A panel toolbar, a timetable, a control toolbar and a screen menu are provided for playing back backed-up video. The way to play back backed-up video is identical to the way to play back recorded video. Refer to the iNEX Standard User's Manual for details.

5.2 Exporting Backed-up Video

You can export backed-up video to USB devices. Exporting backed-up video is identical to exporting recorded video. Refer to the iNEX Standard User's Manual for details.

WEEE (*Waste Electrical & Electronic Equipment*)

Correct Disposal of This Product
(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.